

ABSTRACT

The present invention provides a polymerizable material for making a polymeric article, the polymerizable material comprising: a water-soluble polyvinyl alcohol having crosslinkable groups; and a modifier in an amount sufficient to improve one or more physical properties of a polymeric article made from the polymerizable material, wherein the one or more physical properties are selected from the group consisting of stress at break (N/mm^2), percentage of elongation at break, toughness or energy to break ($\text{N}\cdot\text{mm}$), and susceptibility to fracture. The modifier is selected from the group consisting of nanoparticles having a hydrophilic surface, a copolymer having hydrophobic groups or units for imparting at least one desired physical property to said ophthalmic device and hydrophilic groups or units in an amount sufficient to render the copolymer miscible with the polyvinyl alcohol, and mixtures thereof. In addition, the present invention provides a polymeric article obtained by polymerization of a polymerizable material of the invention and also a method for modifying one or more physical properties of a hydrogel article obtained from the polymerization of a crosslinkable polymer: